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(54) Title: METHODS AND SYSTEMS FOR DISTRIBUTED FIBRE OPTIC SENSING

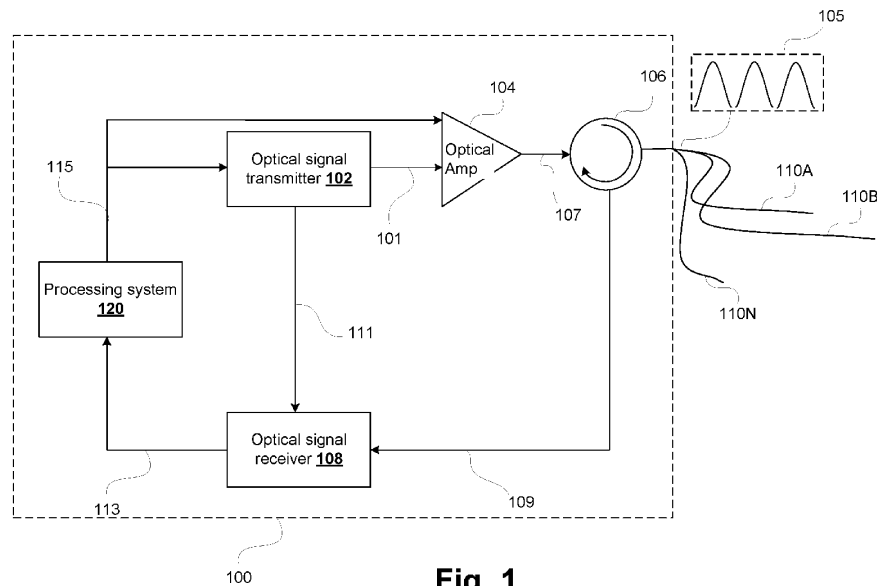


Fig. 1

(57) Abstract: A distributed fibre optic sensing (DFOS) method is disclosed. The method includes (a) repeatedly transmitting interrogating optical signals into at least one optical fibre; (b) receiving backscattered optical signals in a distributed manner along the at least one optical fibre; (c) combining the backscattered optical signals and an optical reference signal; (d) processing the combined signals to determine at least one polarisation state change of the backscattered optical signals along the at least one optical fibre; and (e) determining at least one birefringence event based on the at least one polarisation state change

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